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Friendly flowers or willful weeds?

Government agencies, conservationists, and even nurseries and landscaping companies are promoting the benefits of using native plants for landscaping. Native plants, those which occur naturally in an area, improve the quality of our air, water and soils, and they provide much-needed habitat for birds, bees, ladybugs, butterflies and numerous wildlife. Simply put, natural landscapes are good for the environment.

People often plant exotics — imported non-native plants — for their striking appearance, ease of growing, or because they solve a landscaping problem such as soil erosion, without knowing that the plant newcomers will be harmful.

These invasive plants, also called noxious weeds or exotic pests, often grow faster than native plants, crowding them out or blocking sunlight and consuming nutrients needed by their "resident cousins." The result may be less biodiversity and fewer species of wildflowers; the noxious weed predominates. And when a native plant disappears, other species — both plant and animal — may follow.

Noxious weeds have invaded more than 100 million acres of land in the United States. What can you do to avoid them? Find out which plants are invasive for your area or environment, and if you find that you have a noxious weed problem, look for information about how to manage or get rid of it.

Cornus canadensis, otherwise known as dwarf dogwood, is a hardy herbaceous shrub found throughout much of Alaska. Dwarf dogwood is a favorite with gardeners looking for native varieties of low bedding plants as it typically grows 4 to 8 inches tall, blooming throughout June and July.

Wild about plants!

They're going wild — gardening with native plants

Jeff Brune

Wildflower naturalist Verna Pratt leads an educational hike to identify non-native plants at the Campbell Tract.

That determined little poppy blooming so brightly in the foliage along the trail looks harmless enough, even pretty! But that's a California poppy sprouted from seeds borne by the wind last fall from a garden somewhere in Anchorage. While it looks charming, this little poppy and other invasive plants like it could eventually replace native vegetation in the area. The delicate balance of this section of woods could be forever altered, with potentially harmful effects to the native plant and animal populations that live here.

That's one of the reasons the Bureau of Land Management and the Wildlife Federation of Alaska recently joined other agencies and organizations to host a native plants workshop. Naturalists from the Alaska Native Plant Society, University of Alaska, Cooperative Extension Service and U.S. Fish and Wildlife Service taught a variety of sessions.

Enthusiastic gardeners filled BLM's Campbell Creek Science Center on April 29 to learn about landscaping with native plants; tips for creating backyard habitat for birds, bees and butterflies; herbal and food uses of wild plants; and even how to landscape to discourage moose browsing.

BLM botanist Debbie Blank explains that spring is an ideal time to talk about native plants. "This is the time of year when people select the trees, shrubs and flowers they want to plant for the summer, so we thought hosting a workshop on the benefits of native plants might give them some ideas as they start their summer landscaping. We wanted to 'plant' the idea that there are alternatives to showy ornamentals. Native plants require less maintenance than introduced species. They're better adapted to our climate and more resistant to insect pests or disease. They don't need fertilizer that can run off into our waterways. And native plants provide valuable wildlife habitat that is rapidly being lost in the Anchorage bowl. It's amazing how many birds you can bring to your backyard with just a few plants."

Natural landscaping incorporates the use of native plant species rather than exotic, introduced plants that can make the leap from cultivation in private gardens to eventually

Learn more about gardening with native plants

Contact the Alaska Native Plant Society or the Alaska Cooperative Extension Service. Visit the Anchorage Botanical Gardens off Campbell Airstrip Road or the Georgeson Botanical Garden on the University of Alaska Fairbanks campus. And check out the following web sites:

- www.epa.gov/greenacres
- www.blm.gov/education
- www.nps.gov/plants
- www.for-wild.org
- www.nwf.org

crowding out native vegetation in natural areas. In the Lower 48, most noxious weeds were ornamental plants from other countries. With few natural enemies, nonnative plants can become invasive, reducing the diversity and quantity of native plant species.

Craig Tufts, chief naturalist for the National Wildlife Federation, cites yet another reason to garden with wild plants. "Natural landscapes provide people with a sense of place that distinguishes where they live from the rest of the world." Why should a yard in Anchorage look like one in New Orleans or Dallas?

Naturalist and well known wildflower author Verna Pratt showed slides of native plants that do especially well in the Anchorage area. Pratt was bombarded with questions from participants who wanted to know how to camouflage a fence, what plant species discourage neighborhood cats from digging, how to deal with aphids, tips for transplanting seedlings, and where to obtain native plants locally.

This makes Debbie Blank happy. "It shows that people are thinking more about natural landscaping and saving our native trees and shrubs, instead of trying to squeeze the greatest number of exotic, introduced plants into the smallest space they can, or creating vast expanses of manicured lawns with no thought for the plants and animals that live there now."

Blank and her Wildlife Federation cosponsors feel the workshop was a success. "When people go to local nurseries and begin asking which plants are native and which are introduced, and start asking that more trees and shrubs be left on their lots during construction, we'll know our efforts are paying dividends."

— Teresa McPherson

Did you know?

• Approximately 18,000 plants are native to the ecosystems of North America.

• Forty to 50 percent of all medicinal drugs originate in wild plants.

• Scientists extract genetic material from many native plants to make agricultural crops more resistant to diseases, insect pests, and drought.

• Some 4,000 species of exotic introduced plants have established free-growing populations in the United States. Scientists estimate 400 of these species pose a threat to native plants and animals.

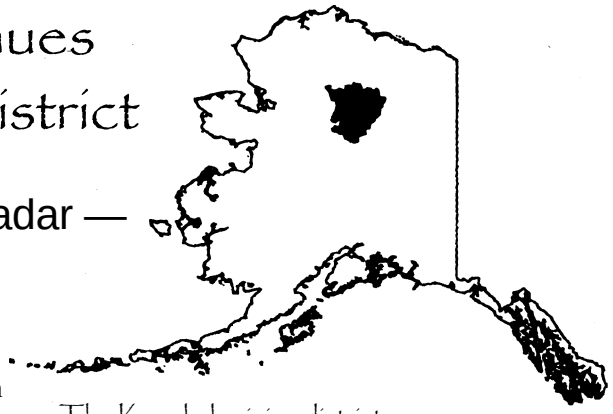
• Alaska is home to about 80 species of butterflies, most of which rely on native plants for habitat.

• Americans spend $27 billion each year on lawn care. Imagine the savings if more lawns and gardens featured low-maintenance native flowers, trees and shrubs.

You can turn your backyard into certified wildlife habitat through the National Wildlife Federation's Backyard Habitat Project. Visit NWF at www.nwf.org for details.

BLM geology team continues search in Koyukuk mining district

Helicopters and ground penetrating radar — mining sure ain't what it used to be



The Koyukuk mining district

North of the Arctic Circle, Alaska's Brooks Range captivates the imagination with 24 hours a day of summer sunlight, snow-capped peaks and meandering river valleys.

This summer a team of BLM geologists is studying the geology and mineral resources of the upper Koyukuk River, which drains off the southern flank of these unique mountains. The Koyukuk project is part of an ongoing series of mining district studies in Alaska began by the former U.S. Bureau of Mines before its transfer to the BLM in 1995. The data from the Koyukuk study will provide minerals information to many users, including federal and state planning agencies, Native corporations interested in developing mineral resources on Native lands, mineral exploration companies seeking new opportunities to develop mineral resources, and individual placer miners.

The study area encompasses the Koyukuk Mining District, which contains 11.6 million acres, about the size of Vermont and New Hampshire combined. Most of the land is managed by the federal government, but the district does include State of Alaska and Native corporation lands.

The district's rich mining history dates back to 1899 when placer gold was discovered on the Koyukuk River. Since then, creeks in the area have yielded nearly 300,000 ounces of placer gold, the second largest gold nugget found in Alaska (139 ounces), and occurrences of lode gold, antimony, copper, zinc, chromium, tungsten, tin and coal. There are more than 1,300 active mining claims, reflecting the considerable interest in the area by the private sector.

Geologists on the Anchorage Mineral Resource Team (AMRT) began working on the Koyukuk study in 1997. Armed with available information about minerals in the area, the team spent the last three summers in the field investigating reported mineral occurrences.

The job involves much research — for example, there may be a mention of mining on a certain creek in an old library report. BLM geologists Joseph Kurtak, Bob Klieforth, John Clark, Beth Grischkowsky, Earle Williams and Mark Meyer have tracked down more than 400 documented mineral occurrences in the district since the study began.

Next comes an on-the-site visit. This may be difficult as descriptions can be vague and some old mine sites are overgrown with vegetation and difficult to find. Glamour is not part of the job; a lot of time is spent tramping through the brush and swatting mosquitoes.

"The Dalton Highway is the only road access to the district," says Klieforth, "so helicopters are used for most of our field work. We have an advantage over the old time prospectors; it took them weeks to cover the same ground that we can go over in a day. The prospectors were a persistent bunch," adds Klieforth, "but they were mainly after placer gold and spent little time looking for hard rock minerals. We may be able to make some discoveries and add to the minerals information base."

Once a mineral occurrence is located, the

Joseph Kurtak

Graduate student Karsten Eden stands near rocks he mapped for a thesis describing the geology of the Nolan area in the Koyukuk Mining District. The results of his work have been published as a BLM open file report.

geology is mapped and rock, soil and stream silt samples are collected. The samples are then sent to a commercial lab for analysis to determine mineral content. These results, along with field mapping, help the team determine what types of minerals are present and which ones could possibly be extracted at a profit. The Koyukuk team is using current mining costs to project the size and grade required for a mineral deposit to be economically feasible.

The Koyukuk project has also resulted in partnerships with other government agencies as well as the private sector. In a joint agreement with the Alaska Division of Geological and Geophysical Surveys (ADGGS), BLM funded an airborne geophysical survey of a 533-square-mile area in the northwest portion of the district. BLM selected the area to be surveyed and the ADGGS administered the contract. The survey consists of flying a series of sensors slung beneath a helicopter across the landscape along a series of closely spaced parallel flight lines. The sensors detect anomalous (unusually high) amounts of metallic minerals in the rocks below.

"These surveys give us something that the old timers didn't have — the ability to see through the vegetative overburden, detecting potentially metal-rich deposits beneath," says Williams. The survey detected numerous anomalies, many of which have yet to be investigated by BLM geologists. The results were published by the ADGGS in 1998.

BLM also joined Silverado Mines Inc., a major claim holder in the district, to support geology graduate student Karsten Eden from the Technical University of Clausthal in Germany. Karsten mapped the bedrock geology of the Nolan mining area near Wiseman to determine the source of the gold in the rich placer deposits. This project was published as a BLM open file report.

Field work for the Koyukuk project is to be completed in 2000. A series of reports will follow, giving detailed information on all documented mineral occurrences and the economics of mining in the Koyukuk District. Now, instead of having to go through a mountain of scattered sources, people will be able to find it all in one place.

— Joseph Kurtak

Joseph Kurtak

BLM geologist Earle Williams (left) and Darrel VanderWeg carry out a geophysical survey at the Ginger Prospect near the headwaters of the Koyukuk River. The instruments they carry can detect metallic minerals through tundra cover.

Joseph Kurtak

A modern placer mining operation on Jay Creek in the Koyukuk Mining District. The Koyukuk has produced nearly 300,000 ounces of gold since the first major discovery in 1899.

Results from the first two years of field work on the project are summarized in BLM Open File Report 74: Mineral Investigations in the Koyukuk Mining District, Northern Alaska — A Progress Report, available from the BLM at no charge. Final reports are due in 2001. For further information about the Koyukuk study contact: Joe Kurtak at: HYPERLINK mailto:jkurtak@ak.blm.gov, jkurtak@ak.blm.gov, or (907) 271-3238; or Don Baggs at HYPERLINK mailto:dbaggs@ak.blm.gov or dbaggs@ak.blm.gov, (907) 271-2454.

Making things right at the Maclaren Glacier

Former copper mine cleans up through BLM's Abandoned Mine Lands program

KJ Mushovic

Barrels (below, right) and other leftovers from mining (far right) littered the Kathleen-Margaret (or K.M.) mine site before the area was cleaned up under BLM's Abandoned Mine Lands program. The clean-up (far left, below) made quite a difference to the view of the landscape (above).

Last summer, near the terminus of the Maclaren Glacier north of the Denali Highway, barrels of used oil, PCB oil, fuel solvents, grease, and abandoned vehicles and mining equipment could be found scattered around an inactive copper mine. Thanks to funding from the Bureau of Land Management's Abandoned Mine Lands program (AML) to clean up abandoned mines on BLM land, and cooperation with the State of Alaska and the US Army Corps of Engineers, the site is being restored to health.

In the late 1950s and early '60s, the Kathleen-Margaret (or K.M.) Prospect mine produced 4,900 pounds of copper under the auspices of the now defunct Defense Minerals Exploration Administration. The mine bustled with activity, but when it was no longer profitable, the operators literally walked away — unfortunately, a common occurrence in the days before mining operations were subject to bonding requirements that would ensure the site was cleaned up.

When BLM Glennallen Field Office (GFO) staff performed an assessment of the site in 1991, they found it cluttered with derelict shacks, trucks and 55-gallon drums leaking fluids. At that time, the site did not rank high enough among all the potentially hazardous sites nationwide submitted to the Environmental Protection Agency to qualify for cleanup funding under the EPA's National Priority list.

KJ Mushovic

In 1998 natural resource specialist Mike Sondergaard prepared a proposal to remove all liquid and solid waste, excavate and remove potentially contaminated soils, and backfill the exposed mine adit (opening) under the new Abandoned Mines Lands program. "Cleanup was essential to prevent further contamination of the surrounding soil, and possible entry of waste products into the Maclaren River," says Sondergaard. "In addition, backfilling the mine adit was needed to remove the risk of human injury or death from a collapsing mine shaft."

The site, situated on steep mountain slopes ranging from 3,000 to 8,000 feet, posed special access and work problems. Harding Lawson and Associates, under contract to the BLM, removed the materials and closed the mine adit during the summer of 1999, finishing just as snow began to fall.

This summer, work includes excavation

KJ Mushovic

In 1999 alone, 17 people died in non-mining accidents on mine property, according to the U.S. Department of Labor's Mine Safety and Health Administration. Three more fatalities have occurred since March, 2000.

KJ Mushovic

of contaminated soil to eliminate the threat of possible water quality degradation to fish and wildlife downstream. As a result of the transfer of some mine site materials, visitors to the Maclaren River Lodge on the Denali Highway may enjoy an interpretive display featuring equipment from the former mine site.

GFO archaeologist Debbie Muenster explains, "The mine site and associated artifacts, dating from the 1950s or later, were 'not historic' in the sense of being eligible for the National Register of Historic Places. The Alaska State Historic Protection Office worked with BLM-Alaska's property specialists to transfer salvaged materials. We're pleased with the public's interest in commemorating both the mine's history and the mining history of the general area."

—KJ Mushovic

BLM abandoned mine lands program reduces risks to health, safety and the environment

Each year, dozens of children and adults are injured or killed from accidents that occur at active and inactive underground mines, sinkholes, pits and quarries. BLM's Abandoned Mine Lands program (AML) is a national effort to clean up abandoned mines on BLM lands. The goal is to eliminate or reduce health and safety risks to the public, and impacts to the environment. Congress budgets about $10 million for AML. In fiscal year 2000, Alaska received $750,000, which funded work at all of the sites identified as ready for assessment or remediation.

When an eligible AML site is identified, a special case record is created. AML case manager Leslie Torrence assists field offices by searching the Alaska Land Information System (ALIS) database to review the 104,000 closed mining claim case records, screening out those no longer under BLM jurisdiction. Based on a preliminary review of administrative records, most of the roughly 65,000 claims still under BLM jurisdiction will not require on-the-ground action.

Serious injuries related to AML safety hazards continue to occur. Most of these hazards involve adits and other mine openings, often hundreds of feet deep. Vertical shafts and openings may be partially covered by vegetation to the point where a person may not see the hole in the ground before stepping into it. People who enter mine openings may not become aware of deadly gases and lack of oxygen until it is too late to escape. Leftover storage buildings, mill structures, equipment, debris, piles of tailings and waste rock, oil and chemical storage drums are also typically found at AML sites, and can be hazardous.

Glennallen Field Office geologist John Rego is preparing to tackle the Simpson and Brennan/Tiger Mine site north of Chitina, and there are other projects across the state. Learn more about BLM's AML program by visiting www.blm.gov//narsc/aml/

Proposed regs address oil and gas leasing in NPRA

BLM held a meeting on June 2 to receive public comments on proposed regulations for the National Petroleum Reserve-Alaska (NPRA). Geologist Chris Gibson introduced Parts 3130 and 3160 (43 Code of Federal Regulations), which apply to oil and gas leasing in the NPRA. The regulations would implement amendments to the Naval Petroleum Reserves Production Act of 1976, authorizing operational activities in the NPRA including unitization of leases, suspensions or waivers of royalty or rental rates, suspensions of operation and production, and subsurface storage agreements. They also address the unique climatic conditions of NPRA, the needs and practices of the oil and gas industry in light of those conditions, and the need to protect natural resources in NPRA.

Gibson says unitization is a means for a group of lessees in a given area to share in the risks and costs associated with oil and gas exploration and development, and also to share in the possible benefits. "Unitization of leases also reduces surface disturbing activities; fewer wells would need to be authorized in order to produce the oil or gas reservoir," Gibson adds.

The regulations would allow operators and BLM to negotiate exploration and development terms before entering into a unit agreement. Operators would be able to use any agreement format in their unit agreement as long as it addressed the following four basic issues: unit area, initial and continuing development obligations, productivity criteria and participating area, and BLM's ability to set or modify the quantity, rate and location of development and production.

BLM releases scientific reports

BLM-Alaska has released the following scientific reports. Copies are on file at selected public libraries throughout Alaska, and are also available while supplies last from the BLM External Affairs Office, 222 W. 7th Ave. #13, Anchorage, AK 99513.

Water Resources of the Fortymile National Wild and Scenic River, Alaska: Stream Gaging Data from 1980-1995. Open File Report 75.

Unalakleet National Wild River, Alaska: Instream Flow Assessment and Recommendations. Open File Report 76.

Economic Feasibility Studies of Mining in the Ahtna, Inc. Selections in the Wrangell-St. Elias National Park and Preserve, Alaska. Open File Report 77.

Geology of Gold Mineralization of the Nolan Area in the Brooks Range, Alaska. Open File Report 78.

Mineral Assessment of Ahtna, Inc. Selections in the Wrangell-St. Elias National Park and Preserve, Alaska. Technical Report 34.

Vegetation Survey of Campbell Tract, Anchorage, Alaska. Technical Report 35.

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http://www.ak.blm.gov/blm_frontier/frontindex.html

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